

GenCore version 5.1.6  
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: March 17, 2004, 18:47:23 ; Search time 25.9237 Seconds  
(without alignments)  
6683.183 Million cell updates/sec

Title: US-09-989-981A-8  
Perfect score: 3506  
Sequence: 1 MAGKAAERGLPKGATPQDT.....FMVLYVSLRFIKKPKSQDW 673

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1045404 seqs, 257433775 residues

Total number of hits satisfying chosen parameters: 1045404

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published Applications AA:  
1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*  
2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep.\*  
3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep.\*  
4: /cgn2\_6/ptodata/1/pubpaa/US06\_PUBCOMB.pep.\*  
5: /cgn2\_6/ptodata/1/pubpaa/US07\_NEW\_PUB.pep.\*  
6: /cgn2\_6/ptodata/1/pubpaa/PCTUS\_PUBCOMB.pep.\*  
7: /cgn2\_6/ptodata/1/pubpaa/US08\_NEW\_PUB.pep.\*  
8: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep.\*  
9: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep.\*  
10: /cgn2\_6/ptodata/1/pubpaa/US09E\_PUBCOMB.pep.\*  
11: /cgn2\_6/ptodata/1/pubpaa/US09C\_PUBCOMB.pep.\*  
12: /cgn2\_6/ptodata/1/pubpaa/US09\_NEW\_PUB.pep.\*  
13: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep.\*  
14: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep.\*  
15: /cgn2\_6/ptodata/1/pubpaa/US10C\_PUBCOMB.pep.\*  
16: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pep.\*  
17: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep.\*  
18: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep.\*

Sequence 2, Appli  
Sequence 1, Appli  
Sequence 13, Appli  
Sequence 10, Appli  
Sequence 5, Appli  
Sequence 27, Appli  
Sequence 10, Appli  
Sequence 4, Appli  
Sequence 10, Appli  
Sequence 242078,  
Sequence 63125, A  
Sequence 1335, Ap  
Sequence 3739, Ap  
Sequence 54421, A  
Sequence 2025, Ap  
Sequence 5740, Ap  
Sequence 14, Appli  
Sequence 5347, Ap  
Sequence 154459,  
Sequence 8, Appli  
Sequence 4, Appli  
Sequence 13, Appli  
Sequence 8, Appli  
Sequence 9, Appli  
Sequence 2, Appli  
Sequence 1520, Ap  
Sequence 2, Appli  
Sequence 5346, A  
Sequence 6180, A  
Sequence 238651,

ALIGNMENTS

RESULT 1  
US-09-989-981A-8  
; Sequence 8, Application US/09989981A  
; Publication No. US20030049730A1  
; GENERAL INFORMATION:  
; APPLICANT: Hobbs, Helen H.  
; APPLICANT: Shan, Bei  
; APPLICANT: Barnes, Robert  
; APPLICANT: Tian, Hui  
; APPLICANT: Tularik Inc.  
; APPLICANT: Board of Regents, The University of Texas System  
; TITLE OF INVENTION: ABCG5 and ABCG8: Compositions and Methods of Use  
; FILE REFERENCE: 018781-007320US  
; CURRENT APPLICATION NUMBER: US/09/989,981A  
; CURRENT FILING DATE: 2002-07-23  
; PRIOR APPLICATION NUMBER: US 60/252,235  
; PRIOR FILING DATE: 2000-11-20  
; PRIOR APPLICATION NUMBER: US 60/253,645  
; PRIOR FILING DATE: 2000-11-28  
; NUMBER OF SEQ ID NOS: 13  
; SOFTWARE: Patentin Ver. 2.1  
; SEQ ID NO 8  
; LENGTH: 673  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; FEATURE:  
; OTHER INFORMATION: human ABCG8 (hABCG8)  
US-09-989-981A-8

Query Match 100.0%; Score 3506; DB 10; Length 673;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 673; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MAGKAAERGLPKGATPQDTSGIQDLRFSSSESNLYFTYSGQNTLEVRDLNYYVDLAS 60  
Db 1 MAGKAAERGLPKGATPQDTSGIQDLRFSSSESNLYFTYSGQNTLEVRDLNYYVDLAS 60  
Qy 61 QVWFEEQLAQKMPWTSPSCNSCELGQNLSPKVRSGQMLAIGSGCGRASLLDVTG 120

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3506	100.0	673	10	US-09-989-981A-8
2	3502	99.9	673	14	US-10-090-455-7
3	2883.5	82.2	672	10	US-09-989-981A-4
4	1961	55.9	374	15	US-10-415-378-9
5	751	21.4	725	12	US-10-424-599-175941
6	697	19.9	651	9	US-09-837-992-3
7	697	19.9	651	10	US-09-989-981A-6
8	697	19.9	651	14	US-10-090-455-6
9	688.5	19.6	652	9	US-09-837-992-1
10	688.5	19.6	652	10	US-09-989-981A-2
11	666	19.0	657	9	US-09-866-866A-14
12	657	18.7	695	12	US-10-424-599-176182
13	663	18.7	663	13	US-10-108-605-245
14	642.5	18.3	655	9	US-09-981-353-35
15	642.5	18.3	655	14	US-10-120-687-61

Db	61	QVWFEQIAQFKPWTSPSCNSCELGIONLSFKVRSQMLAIGSSGCGRASLLDVTG	120
Qy	121	RGHGKIKSGGIWINGOPSSPOLVRKCAVHRQHNQLLNLTVRETLAFIAQWRLPRTFS	180
Db	121	RGHGKIKSGGIWINGOPSSPOLVRKCAVHRQHNQLLNLTVRETLAFIAQWRLPRTFS	180
Qy	181	QAQRKVEDVIAELRLROCADTRVGNMYVRGLSGGERRRVSIGVQLLWNPGLILDEPT	240
Db	181	QAQRKVEDVIAELRLROCADTRVGNMYVRGLSGGERRRVSIGVQLLWNPGLILDEPT	240
Qy	241	SGLDSFTAHLNVLKTSRLAKGNRLVLISLHQPSSDIIFRLFDLVLLMTSGTPIYLGAAQHM	300
Db	241	SGLDSFTAHLNVLKTSRLAKGNRLVLISLHQPSSDIIFRLFDLVLLMTSGTPIYLGAAQHM	300
Qy	301	VOYFTAIGYPCPRYSNPADFYVDLTSIDRRSREQLATREKAQSLAALFLEKVRDLDDFL	360
Db	301	VOYFTAIGYPCPRYSNPADFYVDLTSIDRRSREQLATREKAQSLAALFLEKVRDLDDFL	360
Qy	361	WKAETKDLDEDTCEVSSVTPLDNTCLPSPKMPGAVQOFTTLIRROI SNDFRDLPTLLIH	420
Db	361	WKAETKDLDEDTCEVSSVTPLDNTCLPSPKMPGAVQOFTTLIRROI SNDFRDLPTLLIH	420
Qy	421	GAEACLSMTIGFLYFGHSGIQLSFMDTAALLFMIGALIPFNVLIDVISKYSERAMLYY	480
Db	421	GAEACLSMTIGFLYFGHSGIQLSFMDTAALLFMIGALIPFNVLIDVISKYSERAMLYY	480
Qy	481	ELEDGLYTTGYPYFAKILGELPEHCAYIIYGMPTMYLANRPGLOPFLHFLVWLVVF	540
Db	481	ELEDGLYTTGYPYFAKILGELPEHCAYIIYGMPTMYLANRPGLOPFLHFLVWLVVF	540
Qy	541	CCRMALAAAAALLPTFHMAFFSNALYNSFYLAGGFMINLSLWTPVPAWISKVSFLRWCF	600
Db	541	CCRMALAAAAALLPTFHMAFFSNALYNSFYLAGGFMINLSLWTPVPAWISKVSFLRWCF	600
Qy	601	EGLMKIQFSRRTYKXPLGNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGFMVLYYV	660
Db	601	EGLMKIQFSRRTYKXPLGNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGFMVLYYV	660
Qy	661	SLRFTKQKPSQDW 673	
Db	661	SLRFTKQKPSQDW 673	

RESULT 2  
US-10-090-455-7  
; Sequence 7, Application US/10090455  
; Publication No. US20030027259A1  
; GENERAL INFORMATION:  
; APPLICANT: Chen, Hongyun  
; APPLICANT: Le Bihan, Stephane  
; TITLE OF INVENTION: NOVEL ABCG4 TRANSPORTER AND USES THEREOF  
; FILE REFERENCE: 100103.406  
; CURRENT APPLICATION NUMBER: US/10/090.455  
; CURRENT FILING DATE: 2002-03-01  
; NUMBER OF SEQ ID NOS: 17  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 7  
; LENGTH: 673  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-090-455-7

Query Match 99.9%; Score 3502; DB 14; Length 673;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 672; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 MAGKAAERGLPKGATPQDTSGLOQLRFLSSSDNSLYFTYSGQPNLTLEVRDLNQQVDLAS 60  
Db 1 MAGKAAERGLPKGATPQDTSGLOQLRFLSSSDNSLYFTYSGQPNLTLEVRDLNQQVDLAS 60  
Qy 61 QVWFEQIAQFKPWTSPSCNSCELGIONLSFKVRSQMLAIGSSGCGRASLLDVTG 120

Db	61	QVWFEQIAQFKPWTSPSCNSCELGIONLSFKVRSQMLAIGSSGCGRASLLDVTG	120
Qy	121	RGHGKIKSGGIWINGOPSSPOLVRKCAVHRQHNQLLNLTVRETLAFIAQWRLPRTFS	180
Db	121	RGHGKIKSGGIWINGOPSSPOLVRKCAVHRQHNQLLNLTVRETLAFIAQWRLPRTFS	180
Qy	181	QAQRKVEDVIAELRLROCADTRVGNMYVRGLSGGERRRVSIGVQLLWNPGLILDEPT	240
Db	181	QAQRKVEDVIAELRLROCADTRVGNMYVRGLSGGERRRVSIGVQLLWNPGLILDEPT	240
Qy	241	SGLDSFTAHLNVLKTSRLAKGNRLVLISLHQPSSDIIFRLFDLVLLMTSGTPIYLGAAQHM	300
Db	241	SGLDSFTAHLNVLKTSRLAKGNRLVLISLHQPSSDIIFRLFDLVLLMTSGTPIYLGAAQHM	300
Qy	301	VOYFTAIGYPCPRYSNPADFYVDLTSIDRRSREQLATREKAQSLAALFLEKVRDLDDFL	360
Db	301	VOYFTAIGYPCPRYSNPADFYVDLTSIDRRSREQLATREKAQSLAALFLEKVRDLDDFL	360
Qy	361	WKAETKDLDEDTCEVSSVTPLDNTCLPSPKMPGAVQOFTTLIRROI SNDFRDLPTLLIH	420
Db	361	WKAETKDLDEDTCEVSSVTPLDNTCLPSPKMPGAVQOFTTLIRROI SNDFRDLPTLLIH	420
Qy	421	GAEACLSMTIGFLYFGHSGIQLSFMDTAALLFMIGALIPFNVLIDVISKYSERAMLYY	480
Db	421	GAEACLSMTIGFLYFGHSGIQLSFMDTAALLFMIGALIPFNVLIDVISKYSERAMLYY	480
Qy	481	ELEDGLYTTGYPYFAKILGELPEHCAYIIYGMPTMYLANRPGLOPFLHFLVWLVVF	540
Db	481	ELEDGLYTTGYPYFAKILGELPEHCAYIIYGMPTMYLANRPGLOPFLHFLVWLVVF	540
Qy	541	CCRMALAAAAALLPTFHMAFFSNALYNSFYLAGGFMINLSLWTPVPAWISKVSFLRWCF	600
Db	541	CCRMALAAAAALLPTFHMAFFSNALYNSFYLAGGFMINLSLWTPVPAWISKVSFLRWCF	600
Qy	601	EGLMKIQFSRRTYKXPLGNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGFMVLYYV	660
Db	601	EGLMKIQFSRRTYKXPLGNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGFMVLYYV	660
Qy	661	SLRFTKQKPSQDW 673	
Db	661	SLRFTKQKPSQDW 673	

RESULT 3  
US-09-989-981A-4  
; Sequence 4, Application US/09989981A  
; Publication No. US20030049730A1  
; GENERAL INFORMATION:  
; APPLICANT: Hobbs, Helen H.  
; APPLICANT: Shan, Bei  
; APPLICANT: Barnes, Robert  
; APPLICANT: Tian, Hui  
; APPLICANT: Tularik Inc.  
; APPLICANT: Board of Regents, The University of Texas System  
; TITLE OF INVENTION: ABCG5 and ABCG8: Compositions and Methods of Use  
; FILE REFERENCE: 018781-007320US  
; CURRENT APPLICATION NUMBER: US/09/989,981A  
; CURRENT FILING DATE: 2002-07-23  
; PRIOR APPLICATION NUMBER: US 60/252,235  
; PRIOR FILING DATE: 2000-11-20  
; PRIOR APPLICATION NUMBER: US 60/253,645  
; PRIOR FILING DATE: 2000-11-28  
; NUMBER OF SEQ ID NOS: 13  
; SOFTWARE: Patentin Ver. 2.1  
; SEQ ID NO 4  
; LENGTH: 672  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; OTHER INFORMATION: mouse ABCG8 (mABCG8)  
US-09-989-981A-4

Query Match 82.2%; Score 2883.5; DB 10; Length 672;

Best Local Similarity 81.9%; Pred. No. 1.7e-281;  
Matches 551; Conservative 52; Mismatches 69; Indels 1; Gaps 1;  
QY 1 MAGKAAERGLKPGATPQDTSLGDLRFSESDNSLYFTYQOPNTLEVRDLYNQVDLAS 60  
DB 1 MAEKTKEETQLWNGTVLQDASGLQSLFSESDNSLYFTYQSQNTLEVRDLYNQVDIAS 60  
QY 61 QVPWFQLAQFQMPWTPSPCONSCELGIONLKFYKRSQOMLAIIGSSGGRASLLDVITG 120  
DB 61 QVPWFQLAQFQMPWTPSPCONSCELGIONLKFYKRSQOMLAIIGSSGGRASLLDVITG 120  
QY 121 RHGGKIKSGQIWINQSPSPOLVRKCVARVHQHQLLENLTVRETLAFIAQMLPRFTS 180  
DB 121 RHGGKIKSGQIWINQSPSPOLVRKCVARVHQHQLLENLTVRETLAFIAQMLPRFTS 180  
QY 181 QAQRKRVEDVIAELRLQCADTRVGMVYRGLSGGRRVSVIGVOLLNPGILLIDBPT 240  
DB 181 QAQRKRVEDVIAELRLQCADTRVGMVYRGLSGGRRVSVIGVOLLNPGILLIDBPT 240  
QY 241 SGLDSTAHNLVKTLSRLAKGNRLVLSLHQPRSDIFRFLDLVLLMTSGTPIYLGAAGHM 300  
DB 241 SGLDSTAHNLVKTLSRLAKGNRLVLSLHQPRSDIFRFLDLVLLMTSGTPIYLGAAGHM 300  
QY 301 VQYFTAIGVPCPRYSNPADFYVDLTSIDRRSRQELATREKAQSLAALFLEKVRDLDDPL 360  
DB 301 VQYFTAIGVPCPRYSNPADFYVDLTSIDRRSRQELATREKAQSLAALFLEKVRDLDDPL 360  
QY 361 WKAEKTDLDDETCVESVTPDNCPLSPPTKMGAVQOFTTLIRROISNDRDLPTLLI 420  
DB 361 WKAEKTDLDDETCVESVTPDNCPLSPPTKMGAVQOFTTLIRROISNDRDLPTLLI 420  
QY 421 GBAEACLSMTITGLFYGHGSIQSLFMDTAALLFMIGALIPFNVDLVISKYSERAMLY 480  
DB 421 GBAEACLSMTITGLFYGHGSIQSLFMDTAALLFMIGALIPFNVDLVISKYSERAMLY 480  
QY 480 ELEDGLYTTGYPYFAKILGELPEHCAYIIYGNPTYMLANRPGLOPFLHLLVWLV 540  
DB 480 ELEDGLYTTGYPYFAKILGELPEHCAYIIYGNPTYMLANRPGLOPFLHLLVWLV 540  
QY 541 CCRIMALAAALPTFHMASFFSNALYNSPYLAGGFMINLSSLTWTPAWISKVSFLRWC 600  
DB 541 CCRIMALAAALPTFHMASFFSNALYNSPYLAGGFMINLSSLTWTPAWISKVSFLRWC 600  
QY 601 EGLMKIOPSRTYKMPGLNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGMVLYY 660  
DB 601 EGLMKIOPSRTYKMPGLNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGMVLYY 660  
QY 661 SLRFIKOKPSQDW 673  
DB 661 SLRFIKOKPSQDW 673

RESULT 4  
US-10-415-378-9  
; Sequence 9, Application US/10415378  
; Publication No. US20040014945A1  
; GENERAL INFORMATION:  
; APPLICANT: INCITE CORPORATION; TANG, Y. Tom  
; APPLICANT: YUE, Henry; NGUYEN, Damiel B.;  
; APPLICANT: HAFALIA, April J.A.; ELLIOTT, Vicki S.;  
; APPLICANT: LU, Yan; CHAWLA, Narinder K.;  
; APPLICANT: YAO, Monique G.; BAUGHN, Mariah R.;  
; APPLICANT: GANDHI, Ameera R.; DING, Li;  
; APPLICANT: SANJANWALA, Madhusudan M.; RAMKUMAR, Jayalaxmi;  
; APPLICANT: ARVIZU, Chandra S.; GIETZEN, Kimberly J.;  
; APPLICANT: LAL, Preeti G.; AZIMZAI, Yalda;  
; APPLICANT: KHAN, Farrah A.; THANGAVELU, Kavitha;  
; APPLICANT: THORNTON, Michael B.; LU, Dyung Aina M.;  
; APPLICANT: TRIBOULEY, Catherine M.; WARREN, Bridget A.;  
; APPLICANT: ISON, H. Craig; DAS, Debopriya;  
; APPLICANT: RAUMANN, Brigitte E.; POLICKY, Jennifer L.;  
; APPLICANT: KEARNEY, Liam  
; TITLE OF INVENTION: TRANSPORTERS AND ION CHANNELS

FILE REFERENCE: PI-0270 USN  
; CURRENT APPLICATION NUMBER: US/10/415,378  
; PRIOR FILING DATE: 2003-05-07  
; PRIOR APPLICATION NUMBER: PCT/US01/46055  
; PRIOR FILING DATE: 2001-10-27  
; PRIOR APPLICATION NUMBER: US 60/250,790  
; PRIOR FILING DATE: 2000-12-01  
; PRIOR APPLICATION NUMBER: US 60/252,232  
; PRIOR FILING DATE: 2000-11-20  
; PRIOR APPLICATION NUMBER: US 60/249,661  
; PRIOR FILING DATE: 2000-11-17  
; PRIOR APPLICATION NUMBER: US 60/247,673  
; PRIOR FILING DATE: 2000-11-09  
; PRIOR APPLICATION NUMBER: US 60/245,904  
; PRIOR FILING DATE: 2000-11-03  
; PRIOR APPLICATION NUMBER: US 60/243,989  
; PRIOR FILING DATE: 2000-10-27  
; NUMBER OF SEQ ID NOS: 40  
; SOFTWARE: PERL Program  
; SEQ ID NO 9  
; LENGTH: 374  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: misc\_feature  
; OTHER INFORMATION: Incyte ID No. US20040014945A1 6585710CD1  
US-10-415-378-9  
Query Match 55.9%; Score 1961; DB 15; Length 374;  
Best Local Similarity 99.78; Pred. No. 9.4e-189;  
Matches 373; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 300 MVQYFTAIGVPCPRYSNPADFYVDLTSIDRRSRQELATREKAQSLAALFLEKVRDLDDF 359  
DB 1 MVHFTAIGVPCPRYSNPADFYVDLTSIDRRSRQELATREKAQSLAALFLEKVRDLDDF 60  
QY 360 LWKAETDLDDETCVESVTPDNCPLSPPTKMGAVQOFTTLIRROISNDRDLPTLLI 419  
DB 61 LWKAETDLDDETCVESVTPDNCPLSPPTKMGAVQOFTTLIRROISNDRDLPTLLI 120  
QY 420 HGAECALMSMTITGLFYGHGSIQSLFMDTAALLFMIGALIPFNVDLVISKYSERAMLY 479  
DB 121 HGAECALMSMTITGLFYGHGSIQSLFMDTAALLFMIGALIPFNVDLVISKYSERAMLY 180  
QY 480 YELEDGLYTTGYPYFAKILGELPEHCAYIIYGNPTYMLANRPGLOPFLHLLVWLV 539  
DB 181 YELEDGLYTTGYPYFAKILGELPEHCAYIIYGNPTYMLANRPGLOPFLHLLVWLV 240  
QY 540 FCCRIMALAAALPTFHMASFFSNALYNSPYLAGGFMINLSSLTWTPAWISKVSFLRWC 599  
DB 241 FCCRIMALAAALPTFHMASFFSNALYNSPYLAGGFMINLSSLTWTPAWISKVSFLRWC 300  
QY 600 FEGLMKIOPSRTYKMPGLNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGMVLYY 659  
DB 301 FEGLMKIOPSRTYKMPGLNLTIAVSGDKILSAMELDSYPLAIYIIVIGLSGGMVLYY 360  
QY 660 VSLRFIKOKPSQDW 673  
DB 361 VSLRFIKOKPSQDW 374

RESULT 5  
US-10-424-599-175941  
; Sequence 175941, Application US/10424599  
; Publication No. US20040031072A1  
; GENERAL INFORMATION:  
; APPLICANT: La Rosa Thomas J  
; APPLICANT: Kovalic David K  
; APPLICANT: Zhou Yihua  
; APPLICANT: Cao Yongwei  
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With  
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement  
; FILE REFERENCE: 38-21(53223)B



APPLICANT: Tian, Hui  
APPLICANT: Tularik Inc.  
APPLICANT: Board of Regents, The University of Texas System  
TITLE OF INVENTION: ABCG5 and ABCG8: Compositions and Methods of Use  
FILE REFERENCE: 018781-007320US  
CURRENT APPLICATION NUMBER: US/09/989,981A  
CURRENT FILING DATE: 2002-07-23  
PRIOR APPLICATION NUMBER: US 60/252,235  
PRIOR FILING DATE: 2000-11-20  
PRIOR APPLICATION NUMBER: US 60/253,645  
PRIOR FILING DATE: 2000-11-28  
NUMBER OF SEQ ID NOS: 13  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 6  
LENGTH: 651  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: human ABCG5 (hABCG5)  
US-09-989-981A-6

Query Match 19.9%; Score 697; DB 10; Length 651;  
Best Local Similarity 28.9%; Pred. No. 9.8e-61;  
Matches 187; Conservative 124; Mismatches 241; Indels 96; Gaps 16;

QY 16 TPQDTSGLDQRLFSSESNSLYFTYSGQPNLTLEVRDLNQVDLASQVFWFQLAQKPMW 75  
Db 8 TPGSGMLQVNRGSSQSLGAPAT-APBPHSLGILHASYSVSHVR-PWMD-ITSCROQW 64

QY 76 TSPSCNSCELGIONLSFKVRSCOMLAIGSSGCGRASLLDVITGR-CHGGKIKSGQIWI 134  
Db 65 TRQI-----LKDVSLYVESQINCILGSSGSGKTLLDAMSGRLGRAGTF-LGEVYV 115

QY 135 NGQSPSPOLVRKCVARVROHNOPLLNTVRETLAFIAQMLPRTFSQACRDKRVEDVIAE 194  
Db 116 NGRALRREQDFCSYVLOSDFLLSLTVRETLHYTALLAI-RRGNPGSFQKKEAVMAE 174

QY 195 LRLQCADTRVGNMYVRLSGGERRRVSIGVQLLWNPGLILDEPTSGLDSTFAHNLVKT 254  
Db 175 LSLSHVADRLIGNYSLGGISTGERRRVSIAAQLQDPKVMLEFDEPTGLDCMTANQIVVL 234

QY 255 LSLAKGNRLVLSLHQPBSDIFRLFDVLMTSGTPIVGLAAQHMVQVFTAIGYPCPY 314  
Db 235 LVELARNRIVLTHIQPSELFOQDKTAILSFGELIFCGTPAEMLDFNDCGYPCEH 294

QY 315 SNPADFYDLTSDRRSREQLATEKAQSLAALF-----LEKVRDLDDFLWK 362  
Db 295 SNPFDFYMDLTSVDTQSKEREIETSKRVQMIESAYKKAICHKTLKNIERMKHL----- 348

QY 363 AETHKDLDETCVSSVTPLDNCPLSPPTK-MPGAVQOFTTLIRROISNDPRDLPTLLIHG 421  
Db 349 -----KTLPM-----VPPKTKDSPGVFSKGLVLLRRVTRNLVRNKLAVITRL 390

QY 422 ABACLSMTIGFLYFG-----HGSIQLSFMDTAALLFMIGALIPFNVLIDVSKYSEB 475  
Db 391 LQNLINGLFLFLVLRVRSNVLKGAIQ---DRVGLLYQFVGATPVTGMLNVLNLPVLR 446

QY 476 AMLYYELEGLYTTGTPYFAKILGELPEHCAYIIYGMPTYWLANLRPGLOPFLHFLV 535  
Db 447 AVSDQESQDGLYQKQWMLAYALHVLFPFSSVATMIFSSVCYWTGLHPEVARF----- 499

QY 536 WLWVFCCRIMAAAAALLPTFHMASPFS-----NALYNSFYLAG-----GFM 577  
Db 500 -----GYFSAALLAPHLIGEFLTLVLGIVQNPVNSVALLSIAGVLVSGFL 549

QY 578 INLSLWTPANIKSVFRLWCEGLMKIQFRRTYKMPGLNLTAVS 625  
Db 550 RNIQEMPFPKIIISYFTFKYCYSEILVNVNEFYGLNFTCGSSNSVVTN 597

RESULT 8  
US-10-090-455-6  
; Sequence 6, Application US/10090455

Publication No. US20030027259A1  
GENERAL INFORMATION:  
APPLICANT: Chen, Hongyun  
APPLICANT: Le Bhan, Stephanie  
TITLE OF INVENTION: NOVEL ABCG4 TRANSPORTER AND USES THEREOF  
FILE REFERENCE: 100103.406  
CURRENT APPLICATION NUMBER: US/10/090,455  
CURRENT FILING DATE: 2002-03-01  
NUMBER OF SEQ ID NOS: 17  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 6  
LENGTH: 651  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-090-455-6

Query Match 19.9%; Score 697; DB 14; Length 651;  
Best Local Similarity 28.9%; Pred. No. 9.8e-61;  
Matches 187; Conservative 124; Mismatches 241; Indels 96; Gaps 16;

QY 16 TPQDTSGLDQRLFSSESNSLYFTYSGQPNLTLEVRDLNQVDLASQVFWFQLAQKPMW 75  
Db 8 TPGSGMLQVNRGSSQSLGAPAT-APBPHSLGILHASYSVSHVR-PWMD-ITSCROQW 64

QY 76 TSPSCNSCELGIONLSFKVRSCOMLAIGSSGCGRASLLDVITGR-CHGGKIKSGQIWI 134  
Db 65 TRQI-----LKDVSLYVESQINCILGSSGSGKTLLDAMSGRLGRAGTF-LGEVYV 115

QY 135 NGQSPSPOLVRKCVARVROHNOPLLNTVRETLAFIAQMLPRTFSQACRDKRVEDVIAE 194  
Db 116 NGRALRREQDFCSYVLOSDFLLSLTVRETLHYTALLAI-RRGNPGSFQKKEAVMAE 174

QY 195 LRLQCADTRVGNMYVRLSGGERRRVSIGVQLLWNPGLILDEPTSGLDSTFAHNLVKT 254  
Db 175 LSLSHVADRLIGNYSLGGISTGERRRVSIAAQLQDPKVMLEFDEPTGLDCMTANQIVVL 234

QY 255 LSLAKGNRLVLSLHQPBSDIFRLFDVLMTSGTPIVGLAAQHMVQVFTAIGYPCPY 314  
Db 235 LVELARNRIVLTHIQPSELFOQDKTAILSFGELIFCGTPAEMLDFNDCGYPCEH 294

QY 315 SNPADFYDLTSDRRSREQLATEKAQSLAALF-----LEKVRDLDDFLWK 362  
Db 295 SNPFDFYMDLTSVDTQSKEREIETSKRVQMIESAYKKAICHKTLKNIERMKHL----- 348

QY 363 AETHKDLDETCVSSVTPLDNCPLSPPTK-MPGAVQOFTTLIRROISNDPRDLPTLLIHG 421  
Db 349 -----KTLPM-----VPPKTKDSPGVFSKGLVLLRRVTRNLVRNKLAVITRL 390

QY 422 ABACLSMTIGFLYFG-----HGSIQLSFMDTAALLFMIGALIPFNVLIDVSKYSEB 475  
Db 391 LQNLINGLFLFLVLRVRSNVLKGAIQ---DRVGLLYQFVGATPVTGMLNVLNLPVLR 446

QY 476 AMLYYELEGLYTTGTPYFAKILGELPEHCAYIIYGMPTYWLANLRPGLOPFLHFLV 535  
Db 447 AVSDQESQDGLYQKQWMLAYALHVLFPFSSVATMIFSSVCYWTGLHPEVARF----- 499

QY 536 WLWVFCCRIMAAAAALLPTFHMASPFS-----NALYNSFYLAG-----GFM 577  
Db 500 -----GYFSAALLAPHLIGEFLTLVLGIVQNPVNSVALLSIAGVLVSGFL 549

QY 578 INLSLWTPANIKSVFRLWCEGLMKIQFRRTYKMPGLNLTAVS 625  
Db 550 RNIQEMPFPKIIISYFTFKYCYSEILVNVNEFYGLNFTCGSSNSVVTN 597

RESULT 9  
US-09-837-992-1  
; Sequence 1, Application US/09837992  
; Patent No. US20020081687A1  
GENERAL INFORMATION:  
APPLICANT: Tian, Hui  
APPLICANT: Schultz, Joshua  
APPLICANT: Shan, Bei

```

RESULT 10
US-09-989-981A-2
/ Sequence 2, Application US/09989981A
/ Publication No. US20030049730A1
/ GENERAL INFORMATION:
/ APPLICANT: Hobbs, Helen H.
/ APPLICANT: Shan, Bei
/ APPLICANT: Barnes, Robert
/ APPLICANT: Tian, Hui
/ APPLICANT: Tularik Inc.
/ APPLICANT: Board of Regents, The University of Texas System
/ TITLE OF INVENTION: ABCG5 and ABCG8: Compositions and Methods of Use
/ FILE REFERENCE: 018781-007320US
/ CURRENT APPLICATION NUMBER: US/09/989,981A
/ CURRENT FILING DATE: 2002-07-23
/ PRIOR APPLICATION NUMBER: US 60/252,235
/ PRIOR FILING DATE: 2000-11-20
/ PRIOR APPLICATION NUMBER: US 60/253,645
/ PRIOR FILING DATE: 2000-11-28
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn ver. 2.1
/ SEQ ID NO 2
/ LENGTH: 652
/ TYPE: PRT
/ ORGANISM: Mus musculus
/ FEATURE:
/ OTHER INFORMATION: mouse ABCG5 (mABCG5)
US-09-989-981A-2

```

Query Match	19.6%	Score 688.5	DB 10	Length 652
Best Local Similarity	28.1%	Pred. No. 7.1e-60		
Matches 188	Conservative 125	Mismatches 233	Indels 133	Gaps 15
QY	45	NTLEVRDNLTVQVLDASQV-FWFEQLAQFQMPMTSPSCQNSCELGI-QNLSPKVRSGQMILA	102	
Db	37	HSLGVLVHSYSV-SNRVGPW-----WNKSCQQRDLQTLKDVLSVLYESGGTMC	84	
QY	103	ILGSSGGRASLADVITGSHGGKIKSGOITWNGQPSSPQLVRKCVAVHVOHQNLPLNT	162	
Db	85	ILGSSGSKTLLDASGRRLRTGTLEGEVFNVCGLRRDQPDQCFSVLQSDVFLSSLT	144	
QY	163	VRETAFIAQNRLPRTFSQAQRKRVEDVIABLRQCADTRVGNVYRGLSGERRRVS	222	
Db	145	VRETLRVTAMALCRS-SADFYNNKVEAYMTLSLHVADQMIGSYNFGGSSGERRVS	203	
QY	223	IGVOLLNPGIILIDBPTSGLDSTFAHNVLKTLRLAKGNRLVLJLSLQPKRSIDIPRLFDL	282	
Db	204	IAAQILQDPKMWLDEPTTGCDCTWANTQIVLLJLAEAREDRIVVITIHQPSRSLFQHPDK	263	
QY	283	VLLMTSGPTPYLGAACHWQYFATIGVPCPRVSNPADFVLDLTSIDRRASRQELATREKA	342	
Db	264	IALLTYELVCGTPEEMLGFFNCGYCPCHESNPFDFYMDLTSVDTSRREIREITYKRV	323	
QY	343	QSLAALF-----LEKVRDLDDFLWKAETKDLDEDTCEVSSVTPDNLCLPSPT	390	
Db	324	QWLCAFKESDIYHKILENIERARYL-----KTLPM-----VPFKT	359	
QY	391	K-MPGAVQOFTTLIRROI SNDFRDLPTLLIHGAECALMSWTIGF-LYFGHGSIQLSFWD	447	
Db	360	KDPPGPMFGKVLRRVTRNLMMENKQAVNRLVQNLIIMGLFIYFLVLRVQNNTLKGAVQD	419	
QY	448	TAALLFMIGALIPFNWILDVISKCYSERAMLYYLEDEGLYTTGPYFFAKILGELEPHCAY	507	
Db	420	RVGLLYLVGATPYTGMLNAVNLFPMLRAVDSQSDGLYHKWQMLLAVLVHLPFSVIA	479	
QY	508	IIIVGMPYTWLANLRPGIQZFLLEHLLVLVWLVFCCRIMALAAALALPIFHMASRFSNAL-	566	
Db	480	TVIFSSVCYTWLGYPEVARF-----GYFSAAALLAPHLIGEFITVLVL	522	
QY	567	-----YNFYLAGGFMINLSSLNTVPAMI SKVFSFLRWCFPEGLMKI OFS	609	
Db	523	GTVOENPTWNSIVALLSIGLLIGSGPIRINQEMPIPLKILGYFTFKYCCBILVVNF-	581	





QY 546 ALAAALPTFHMAFSPNALYNSFYLAGGMINLSLWTPAW---ISKVSLRWCFEG 602  
 DB 520 MMVVASLVNFMGIITGAGIGIMMTSGFFRLSDL-EKPVWRYPDISIISYGSWAIQG 578  
 QY 603 -----LAKIQSPRRYKMPGLNLAIVSGDKILSAM---ELDS---YPLVAYIYLVIGLS 651  
 DB 579 SYKNDLLGLEFD-----PLLPQPKLTGVEVITHMLGIELNHSKWDLAALFVILI--- 629  
 QY 652 GGFVLYYVSLRPIKQPS 670  
 DB 630 -CYRLLPFTVLKP-KERAS 646

RESULT 13  
 US-10-108-605-245  
 ; Sequence 245, Application US/10108605  
 ; Publication No. US20020160934A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Broadus, Julie  
 ; APPLICANT: Stam, Lynn  
 ; APPLICANT: Bachmann, Jane  
 ; APPLICANT: Kandar, Kim  
 ; TITLE OF INVENTION: NUCLEIC ACID SEQUENCES FROM DROSOPHILA MELANOGASTER THAT ENCODE  
 ; TITLE OF INVENTION: PROTEINS ESSENTIAL FOR LARVAL VIABILITY AND USES THEREOF  
 ; FILE REFERENCE: 311338  
 ; CURRENT APPLICATION NUMBER: US/10/108,605  
 ; CURRENT FILING DATE: 2002-03-27  
 ; PRIOR APPLICATION NUMBER: US 09/761,142  
 ; PRIOR FILING DATE: 2001-01-16  
 ; PRIOR APPLICATION NUMBER: US 60/176,418  
 ; PRIOR FILING DATE: 2000-01-14  
 ; NUMBER OF SEQ ID NOS: 361  
 ; SOFTWARE: Patent In Ver. 2.1  
 ; SEQ ID NO 245  
 ; LENGTH: 663  
 ; TYPE: PRT  
 ; ORGANISM: Drosophila melanogaster  
 US-10-108-605-245

Query Match 18.7%; Score 656; DB 13; Length 663;  
 Best Local Similarity 30.3%; Pred. No. 1.4e-56;  
 Matches 178; Conservative 113; Mismatches 265; Indels 32; Gaps 10;

QY 88 IONLSFKVRSOMLAIIGSSGGRASLDVITGRHGQ--KIKSGQIWINQSPSPOLVR 145  
 DB 89 LKNVCGVAYPGLLAVMGSSGAGKTLNLNALAFSPQIQVSPGMLNQCQPDAKEMQ 148  
 QY 146 KCAVHRQHNQLPLNLTVRETLAFTAQMLPRTFSQAQRDKRVEDVIAELRLQCADTRY 205  
 DB 149 ARCAVQDDLFIGSLTAREHLIFQAVRMPRHLYRQVARVQVQIELSLSKQHTII 208  
 QY 206 G-NMVRGLSGGERRRVSIGVOLLWNPGLILIDPTSGLDSTAHNLVKTLSRLAKGNRL 264  
 DB 209 GVFGVKGSGGERKRAFASALTDPELLICDEPTSGLDSTAHNVQVVKLSKQKT 268  
 QY 265 VLISLHQRSDFRFLDVLVMTSGTPYLGAAQHMVQYFTAIGYPCPRYGNPDAFYVDL 324  
 DB 269 VILTIHQPSSELFELFDKILLMAECRAVFLGTPSEAVDFSVGAQCPTNVPADFYVQV 328  
 QY 325 TSIDRRSREQLATREKAQSLAALP-LEKV-RDLDDFLWKAETKDLDDTCVSSVTPLD 382  
 DB 329 LAV---VFGREIESRDRIAKICDNFAISKVARDMEQLL---ATKNLEK-----PLE 373  
 QY 383 TNCPLSP---TKMPGAVQOFTTLRROIISNDFRDLPTLLIHGAECALMSMTIGFLYFGH 438  
 DB 374 -----QPENGYTYKATWQFRAVLWRSLVSLKEFLVAVKVLRIQTWAILGLIFLQ 428  
 QY 439 GSIQSFMDTAALLFMGALIPFNVLIDVSKYGERAMLYELEDGYITGTPFFAKIL 498  
 DB 429 QLTQGVNMINGAIEFLFTNTMTFONVFATINFTSELFPVFMREARSRLRYCDTVPFGKTI 488  
 QY 499 GELPEHCAYIIYGYMPTYMLANLRPGLQFLLHFLVWLVFCCRIMALAALALPTPHM 558

DB 489 AELPLFLTVPLVFLTAIAYPMIGLRAGVLHFFNCLALVTLVANVSTSFQYLLISCASSTSM 548  
 QY 559 ASFFPNALYNSFYLAGGMINLSLWTPAWISKVSLRWCFEGMLKIQPS---RRTYKM 615  
 DB 549 ALUSVGPVPIIFLLPGGFFLNSGVVYLKWLSTLSWFRYANEGULLINQWADVPEGEISC 608  
 QY 616 PLGNLTIAVSGDKILSAMELDSYPLVAYIYLVIGLSGGMVLYYVSLR 663  
 DB 609 TSSNTTSPSSGKVLLETNFSAADPLDYGLAILIVSFRVLAYLALR 656

RESULT 14  
 US-09-981-353-35  
 ; Sequence 35, Application US/09981353  
 ; Patent No. US20020160382A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Lasek, Amy W.  
 ; APPLICANT: Jones, David A.  
 ; TITLE OF INVENTION: GENES EXPRESSED IN COLON CANCER  
 ; FILE REFERENCE: PA-0038 US  
 ; CURRENT APPLICATION NUMBER: US/09/981,353  
 ; CURRENT FILING DATE: 2001-10-11  
 ; NUMBER OF SEQ ID NOS: 194  
 ; SOFTWARE: PERL Program  
 ; SEQ ID NO 35  
 ; LENGTH: 655  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 ; NAME/KEY: misc feature  
 ; OTHER INFORMATION: Incyte ID No. US20020160382A1 5517972CD1  
 US-09-981-353-35

Query Match 18.3%; Score 642.5; DB 9; Length 655;  
 Best Local Similarity 27.2%; Pred. No. 3.1e-55;  
 Matches 187; Conservative 139; Mismatches 273; Indels 89; Gaps 21;

QY 19 DTSGLDQLRFSSEDSNLSVFTYSGQPNTLEVRLNLYQVLDASQVWPFLQAKFMPTSP 78  
 DB 16 NING-----FPATASNDLKAFTEGA--VLSFHNICYRVKLSGPF-----LP---- 54  
 QY 79 SCQNSCELG-I-QNLSFKVRSQMLAIIGSSGGRASLDVITGRHGKIKSGQIWINQ 137  
 DB 55 -CRKPEKEILSNINGIMKPG-LNALIGTGGKSLDLDVLAARKDPGL-SGDVLINGA 111  
 QY 138 BSSPQLVRKC-VAHVROHNQLPLNLTVRETLAFTAQMLPRTFSQAQRDKRVEDVIAELR 196  
 DB 112 PRPANT--KNSGYVVQDDVVGTLTVRENLOFSALRLATMTWHEKNERINRVIQELG 169  
 QY 197 LRQCADTRYGNMYVRGLSGGERRRVSIGVOLLWNPGLILIDPTSGLDSTAHNLVKTLS 256  
 DB 170 LDKVADSKVGTQPIRGVSGGERKRTSIGMELITDPSILFLDEPTTGLDSTANAVLLIK 229  
 QY 257 RLAKGNELVLSLHQPSSDIFFELDLVLMTSGTPYLGAAQHMVQYFTAIGVPCPRYN 316  
 DB 230 RMSQORTIIFSIHQPRYSIFKLFDLSLTLASGRIMFHGPAQEALGYFESAGYHCEAYNN 289  
 QY 317 PADFYVDLTSIDRR-----SREQLATRE--KAQSLAALFLEKVRDL--DDFLWKAETK-- 366  
 DB 290 PADFFLDIINGDSTAVALNREEDFKATEIIEPSKQKPLIEKLAIEIYVNSFVK-ETKAE 348  
 QY 367 -----DDEDTCVSSVTPDNTCLPSPFTKMPGVQOFTTLIRQISNDFRDLPTLI 419  
 DB 349 LHQLSGGKKKKTIVFKIEISYTTSPFC-----HOLRWVSKRSFKNLGNPOASTA 397  
 QY 420 HGAECALMSMTIGFLYFGHSGIQLSEMDTAALLFMGALIPFNVLIDVSKYCS----- 473  
 DB 398 QIIVTVVLGLVIGAIYFGLKNDSTGQNRAVLFFL-----TTNQCFSSVSAYE 446  
 QY 474 -----ERAMLYELEDGYITGTPFFAKILGE-LPEHCAYIIYGYMPTYMLANLRPGLQ 528  
 DB 447 LFVVEKKLFIHEYISGYRVSYSYFLGKLSDLPLMRLPSIIFTCTIVFMLGLKPKADAP 506



QY 529 LLHFLVLMVWVFCRIMALAALPTFHMASFFSNALYNSFYLAGGFMINLSLWTPA 588  
 Db 507 FVMMFTLMMVAYSASSMALAIAGQSVSVVAILMTICFVMMIFSGLLVNLTTIASWLS 566  
 QY 589 WISKVSFLWRCWEGMKIOPSRRTYKMPGLNLT-----IAVSGDKIL--SAMELDSYP 639  
 Db 567 WLQVFSIPRYGFTALQHNELQGNF--CPGLNATGNNPCNYATCTGEEYLVKQIDLSPWG 625  
 QY 640 LYAIVLIVIGLSGGFMVLYVSLRFIKQ 667  
 Db 626 LMKHVALACMIVIFLTIAVLLFLKX 653

RESULT 15  
 US-10-120-687-61  
 ; Sequence 61, Application US/10120687  
 ; Publication No. US20030082155A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Massachusetts General Hospital  
 ; TITLE OF INVENTION: Stem Cells of the Islets of Langerhans and Their Use in Treating  
 ; TITLE OF INVENTION: Mellitus  
 ; FILE REFERENCE: 3284/1235B  
 ; CURRENT APPLICATION NUMBER: US/10/120,687  
 ; CURRENT FILING DATE: 2002-04-11  
 ; PRIOR APPLICATION NUMBER: US60/169082  
 ; PRIOR FILING DATE: 1999-12-06  
 ; PRIOR APPLICATION NUMBER: US 09/963,875  
 ; PRIOR FILING DATE: 2001-09-25  
 ; PRIOR APPLICATION NUMBER: US 60/215109  
 ; PRIOR FILING DATE: 2000-06-28  
 ; PRIOR APPLICATION NUMBER: US 60/238880  
 ; PRIOR FILING DATE: 2000-10-06  
 ; PRIOR APPLICATION NUMBER: US 09/731261  
 ; PRIOR FILING DATE: 2000-12-06  
 ; NUMBER OF SEQ ID NOS: 61  
 ; SOFTWARE: Patent in version 3.1  
 ; SEQ ID NO 61  
 ; LENGTH: 655  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 ; US-10-120-687-61

Query Match 18.3%; Score 642.5; DB 14; Length 655;  
 Best Local Similarity 27.2%; Pred. No. 3.1e-55;  
 Matches 187; Conservative 139; Mismatches 273; Indels 89; Gaps 21;  
 QY 19 DTSLQDRLFSSSDNSLFTYSGQPTLEVRDLNVOYDLASQVPWFELAQFKMWTSP 78  
 Db 16 NTNG-----FPATASNDLKAFTEGA--VLSEFNICYRVKLSGF-----LP---- 54  
 QY 79 SCQNSCELGT-QNLSFKVRSQMLAIGSSGCGRASLLDVITGRGHGKIKSGQIWIWQ 137  
 Db 55 -CRKPYEKEILSNINGIMKPG-LNALIGPTGGKSSLLDVLAARKDPSGL-SGDVLINGA 111  
 QY 138 PSSPQLVRKC-VAHVQHNLNLTRETLAFIAQMRLPRTFSQQRKRVEDVIAELR 196  
 Db 112 PRPANF--KNSGVYVQDDVWMTLTVRENLOFSAALRLATTMTNHEKNERINRVIOELG 169  
 QY 197 LROCADTRVGNMYVRGLSGGERVSGVQOLLNPGILIDEPSTGLDSTFAHNLVKTL 256  
 Db 170 LDKVADSKVGTQIRGVSGGERKETSIGMELITDPSILFDLDEPTTGLDSTANAVILLK 229  
 QY 257 RLAKGNRLVLIHQPRSDIFRLFDLVLLMTSGTPYVLGAAQHMVOYFAIGPCPRYSN 316  
 Db 230 RMSKQRTIIFSTHQPRYSIFKLFDSLTLLASRLMFGHFAOEALGFESAGYHCEAYNN 289  
 QY 317 PADFYVDLTSIDRR---SREQLATRE--KAQSLAALFLEKVRDL--DDFLWKAETK-- 366  
 Db 290 PADFFLDIINGDSTAVLNREEDFKATEIEIPSKQDKPIEKIAEIVVNSSFYK-ETKAE 348  
 QY 367 -----DLDEDTCVFSSVTPPLDNCPLSPETKMPGAVQVQFTTLIRQINDFRDLPTLLI 419

Db 349 LHQSGGEKKKITVPKEISYTTSTFC-----HQLRWVSKRSFKVLLGNPOASIA 397  
 QY 420 HGAECALMSMTIGLYFGHGSIQLSFMDTAALLFMICALIPFNVLIDVISKYS----- 473  
 Db 398 QIIVTVVLGLVIGAIYFGLKNDSTGIGNRAGVLFFL-----TTNQCFSSVSAVE 446  
 QY 474 ----ERAMLYYELEDGLYTTGPPYFFAKILGE-LPEHCAYIIIIYGMPTYWLANLRPGLQPF 528  
 Db 447 LFVVEKCLFIEYISGYRVSSYFLGKLLSDLLPMRLPSIIITCIYFMGLGKPKADAF 506  
 QY 529 LLHFLVLMVWVFCRIMALAALPTFHMASFFSNALYNSFYLAGGFMINLSLWTPA 588  
 Db 507 FVMMFTLMMVAYSASSMALAIAGQSVSVVAILMTICFVMMIFSGLLVNLTTIASWLS 566  
 QY 589 WISKVSFLWRCWEGMKIOPSRRTYKMPGLNLT-----IAVSGDKIL--SAMELDSYP 639  
 Db 567 WLQVFSIPRYGFTALQHNELQGNF--CPGLNATGNNPCNYATCTGEEYLVKQIDLSPWG 625  
 QY 640 LYAIVLIVIGLSGGFMVLYVSLRFIKQ 667  
 Db 626 LMKHVALACMIVIFLTIAVLLFLKX 653

Search completed: March 17, 2004, 19:53:53  
 Job time : 27.9237 secs